AMENDMENTS TO THE CLAIMS:

Claim 1 (Currently Amended) ~~Method~~ A method for a digital transmission system, in which a first and second known symbol sequence ~~($s_1, s_2, ..., s_M$)~~ are transmitted, the frequency offset ~~(ΔF)~~ of the transmission system is estimated by comparing a first section ~~(^1f_M)~~ of the received signal ~~(r)~~ corresponding to the first symbol sequence with a second ~~action~~ section ~~(^2f_M)~~ of the received signal ~~(r)~~ corresponding to the second symbol sequence, and the square of the absolute value of a pulse response ~~(h)~~ of the transmission system is reduced in a time domain in order to lessen the influence of symbols ~~(x)~~ adjacent to the first or second known symbol sequence ~~($s_1, s_2, ..., s_M$)~~ on the first and second section<u>s</u> ~~(^1f_M,^2f_M)~~, respectively, of the received signal ~~(r)~~<u>, wherein the energy of a domain of the pulse response of the transmission system relative to the total energy of the pulse response is reduced with the aid of an all-pass filter, and wherein the all-pass filter is adapted to achieve a low-phase pulse response of the transmission system.</u>

Claim 2 (Currently Amended) ~~Method~~ <u>The method</u> according to Claim 1, ~~in which~~ <u>wherein</u> the first and second symbol sequence ~~($s_1, s_2, ..., s_M$)~~ are selected to be identical to one another.

Claim 3 (Currently Amended) ~~Method~~ <u>The method</u> according to Claim 1 or 2, ~~in which~~ <u>wherein</u> the reduction in the square of the absolute value of the domain of the pulse response ~~(h)~~ of the transmission system is undertaken with the aid of a filter ~~(14)~~.

Claim 4 (Currently Amended) ~~Method~~ <u>The method</u> according to Claim 3, ~~in which~~ <u>wherein</u> a <u>the</u> pulse response ~~(h)~~ of the transmission system is estimated.

Claim 5 (Currently Amended) ~~Method~~ The method according to Claim 4, ~~in which~~ wherein coefficients of the filter ~~(14)~~ are determined and/or adapted by means of the estimated pulse response ~~(h)~~.

Claim 6 (Currently Amended) ~~Method~~ The method according to Claim ~~6~~ 1, ~~in which~~ wherein the pulse response ~~(h)~~ is shortened.

Claim 7 (Cancelled)

Claim 8 (Cancelled)

Claim 9 (Currently Amended) ~~Method~~ The method according to Claim ~~8~~ 1, ~~in which~~ wherein one value $({}^{1}f_{M}, {}^{2}f_{M})$ of the first and second section$\underline{s}$ of the received signal ~~(r)~~ is determined by sampling the received signal ~~(r)~~.

Claim 10 (Currently Amended) ~~Method~~ The method according to Claim 9, ~~in which~~ wherein the angular difference ~~($\Delta \varphi$)~~ in the complex plane between the first and second sample$\underline{s}$ $({}^{1}f_{M}, {}^{2}f_{M})$ is used to estimate the frequency offset ~~(ΔF)~~.

Claim 11 (Currently Amended) ~~Method~~ The method according to Claim 10, ~~in which~~ wherein several pairs of samples ~~$([{}^{1}f_{1}, {}^{2}f_{1}], [{}^{1}f_{2}, {}^{2}f_{2}], ..., [{}^{1}f_{M}, {}^{2}f_{M}])$~~ are averaged over the angular differences ~~($\Delta \varphi$)~~.

Claim 12 (Currently Amended) ~~Method~~ The method according to Claim 11, ~~in which~~ wherein the signals are transmitted in blocks~~, in particular in accordance with a GSM standard and/or EDGE standard~~.

Claim 13 (Currently Amended) ~~Device (1)~~ A device for a digital transmission system, comprising a transmitting device for transmitting a first and $\underline{a}$ second known symbol sequence ~~$(\{s_1, s_2, ..., s_M\})$~~, and means ~~(15)~~ for comparing a first section $({}^{1}f_{M})$ of the received signal ~~(r)~~ corresponding to the first symbol sequence

with a second section (^2f_M) of the received signal (r) corresponding to the second symbol sequence, ~~as a result of which it is possible to estimate~~ from which the frequency offset (ΔF) of the transmission system is estimated, characterized in that the device (1) comprises a first module (14) for reducing the square of the absolute value of a pulse response (h) of the transmission system in a time domain, ~~it being possible by means of the reduction~~ in order to lessen the influence of symbols (x) adjacent to the first or second known symbol sequence (~~{s₁, s₂, ..., s_M}~~) on the first and second section (^1f_M, ^2f_M), respectively, of the received signal (r). wherein the first module comprises an all-pass filter, and wherein the all-pass filter is adapted to achieve a low-phase pulse response of the transmission system.

Claim 14 (Currently Amended) ~~Device (1)~~ The device according to Claim 13, ~~in which~~ wherein the first and second symbol sequence (~~{s₁, s₂, ..., s_M}~~) are identical to one another.

Claim 15 (Currently Amended) ~~Device (1)~~ The device according to Claim 13 or 14, ~~in which~~ wherein the first module (14) comprises a filter.

Claim 16 (Currently Amended) ~~Device (1)~~ The device according to Claim 15, ~~which comprises~~ further comprising a second module (11) for estimating a pulse response ($\hat{h}$).

Claim 17 (Currently Amended) ~~Device (1)~~ The device according to Claim 16, ~~which comprises~~ further comprising a third module (12) for determining and/or adapting suitable coefficients of the filter (14).

Claim 18 (Currently Amended) ~~Device (1)~~ The device according to Claim ~~17~~ 13 ~~in which~~ wherein the pulse response (h) ~~can be~~ is shortened by means of the first module (14).

Claim 19 (Cancelled)

Claim 20 (Cancelled)

Claim 21 (Currently Amended) ~~Device (1)~~ The device according to Claim ~~20~~ 13, ~~which comprises~~ further comprising a sampling device for the received signal ~~(r)~~, with the aid of which one value $(^1f_M, ^2f_M)$ of the first and second section of the received signal ~~(r)~~ can be sampled.

Claim 22 (Currently Amended) ~~Device (1)~~ The device according to Claim 21, ~~which comprises~~ further comprising means ~~(16)~~ for estimating the frequency offset ~~(ΔF)~~ from the angular difference ~~(Δφ)~~ in the complex plane between the first and second sample $(^1f_M, ^2f_M)$.

Claim 23 (Currently Amended) ~~Device (1)~~ The device according to Claim 22, ~~which comprises~~ further comprising means for determining an average value of the angular differences ~~(Δφ)~~ of several pairs of samples $(\{[^1f_1, ^2f_1], [^1f_2, ^2f_2], ..., [^1f_M, ^2f_M]\})$.

Claim 24 (Currently Amended) ~~Device (1)~~ The device according to Claim 23, ~~which~~ wherein the device is adapted for transmission in blocks~~, in particular in accordance with a GSM standard and/or EDGE standard~~.